

Mead CompuChem

President FL-174-09
3308 East Chapel Hill/Nelson Highway
Post Office Box 12652
Research Triangle Park, NC 27709
Telephone: 919-549-8263
800-334-8525

15770

July 8, 1983

RECEIVED OCT 25 1983

Dr. Alfred Haebeler
USEPA
Support Services Branch (WH-548-A)
Hazardous Response Support Division
401 M Street, S.W.
Washington, D.C. 20460

Dear Fred:

The new protocols for semi-volatile analysis are currently not amenable to running samples on a routine basis (IFB WA 83 A094, Contract 68-01-6762). In order to prevent buildup of delinquent samples, I have decided to revert to the calibration protocols of the previous contract on a 3-week interim basis (IFB WA 82 A155, Contract 68-01-6727). The changed surrogate and deliverable items of the new protocols will be followed. I will provide you detailed technical information documenting all problems with the new protocols within the next 10 days.

I believe this change is in the best interest of the program. However, if this is unacceptable to you, please call immediately.

Sincerely,



R. Lee Myers, Ph.D.

RLM:eh

cc: S. Kovell
Dick Thacker - SMO
Gareth Pearson - EMSL

Case 1887

QUALITY ASSURANCE NOTICE: EPA CASE#.

In addition to the difficulties experienced in the analysis of semi-volatile calibration standards referenced in the attached memorandum from Dr. R. L. Myers at CompuChem to Dr. A. Haebeler, USEPA, 7/8/83, similar problems have been seen in the initial volatile calibration analyses. The Laboratory is, consistent with the semivolatiles, reverting to the calibration protocols of the previous contract for volatiles, until the criteria problems can be overcome or the criteria themselves are changed for this contract.

Paul Myers

Director, Quality Assurance July 22, 1983

The semivolatile calibration standards criteria being applied by CompuChem for Calibration Check Compounds is that the shift check standard must have for those compounds a response factor which is within the 20% difference criterion compared to the multipoint calibration standard of the same level. Again, the old protocol criteria is being applied, in which the average of the response factor differences are summed, so some individual standards response factor may be outside the 20% criteria, but the average of all may be less than 20%; this would be acceptable, and then samples would be run.

Paul Myers

Director, Quality Assurance July 22, 1983

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Case 1887

CASE SUMMARY--CASE #1887

The following Quality Assurance Notices apply to Case #1887:

QUALITY ASSURANCE NOTICE

Semivolatile blank #6078 was injected directly after a sample containing high levels of pentachlorophenol. The blank had this compound in it at 960 ug/kg. Because this was suspected as column carryover, an attempt was made to reinject the blank, however, the base/neutral fraction had evaporated from the vial. This fraction was reconstituted and combined with the acid fraction for analysis on GC/MS. The results indicated that pentachlorophenol was indeed carryover, since the sample was BDL for all priority pollutants. We are reporting the original blank data with reference to this notice; also included is the RIC of the reinjected blank to verify the BDL results.

Bob Whitehead
Quality Assurance Specialist

QUALITY ASSURANCE NOTICE

The semivolatile fraction of sample spike # 5824 and duplicate spike # 5825 exhibited unusual percent recovery values for the compound(s) listed below. These values are outside of control limits due to the non-homogenous nature of the soil sample used in preparing these spikes. This original sample (# 5802) contained the compound(s) listed below in the "non-spiked" analysis.

compound

1,2,4-trichlorobenzene

Bob Whitehead *BW 9-25-87*
Quality Assurance Specialist

QUALITY CONTROL NOTICE

Because of the high levels of PCB's in sample # 5826 & 5827, there is no pesticide spike data available for reporting. The presence of the PCB's effectively masked that of the spike compounds, preventing accurate quantitation. Duplicate data are available which confirm these results.

RECEIVED OCT 2 5 1987

Bob Whitehead *BW 10-1-87*
Quality Control *Case 1887*

QUALITY ASSURANCE NOTICE

CC #4078

The following notice regards CompuChem's current policies concerning the evaluation of TCDD data. Any blanks with surrogate recoveries outside control limits will also be affected by these policies.

- (1) We are committed to rerun TCDD fractions if the recovery of the 1,2,3,4 TCDD surrogate drops below contract mandated levels.

Soils 11-128%

Waters 26-104%

- (2) If a TCDD rerun is required on a specific sample, the preparation process will start:

(a) With a split of the base neutral extract if B/N surrogate recoveries are within contract specified limits.

(b) With a re-extraction of the original sample if the B/N surrogates are outside of contract specified levels.

If the TCDD fraction precedes the SV fraction through the system, a re-prep should be scheduled due to the low probability of a B/N surrogate failure. If the B/N fraction is then later determined to have bad surrogate recoveries, a full re-extraction can then be performed.

- (3) If a TCDD blank has bad recoveries, the following rules will apply:

(a) All samples associated with the blank will be run, surrogate recoveries determined and the amount of native TCDD, if any, calculated.

(b) If the sample has surrogate recovery within contract specifications and does not have any native material present, it will be reported out with the appropriate QC notice.

(c) If, however, either surrogate recovery is out of the acceptable range or native TCDD is identified, the sample must be reprocessed based on the rules identified in point 2.

- (4) If native TCDD is found in the blank the entire batch must be reextracted.

- (5) Based on the rules defined in Point 2, if a group of samples are going to be reprepared from the base/neutral fraction, a new blank will be required. A CompuChem number for this blank can be obtained by using the the number 180 QC counter on the HP3000 system; a 1:20 insertion rate is required. This blank should start with 250 microliters of methylene chloride and follow all of the reprep steps.

- (6) If the second TCDD also fails to produce acceptable results we will invoice the EPA for the re-analysis of a full pesticide/TCDD fraction.

RECEIVED OCT 25 1983

Paul Mills
Director, Quality Assurance

Case 1887

QUALITY ASSURANCE NOTICE

The statements checked below apply to the pesticide fraction of sample # 5862. These statements apply to problems incurred with the quantitation of the surrogate, dibutyl chlorendate, or the spike compounds (QC samples only) flagged by an asterisk (*) on the compound list.

- ☐ No DBC recovery available due to a _____ dilution factor.
- ☐ No spike recovery available due to a _____ dilution factor.
- ☐ No spike recovery available due to severe matrix interference and/or the presence of high levels of PCBs which prevent quantitation of these compounds.
- ☒ No DBC recovery due to severe matrix interference.
- ☐ Variations between duplicate samples due to non-homogenous nature of soil sample.
- ☐ No DBC recovery due to _____ dilution factor on packed/capillary (circle) and matrix interference on packed/capillary columns (circle).
- ☐ Low/high (circle) spike recoveries due to matrix interference.
- ☐ Additional Analyst/Quality Assurance Specialist comments:

initials SS

date 9/23/83

QUALITY CONTROL NOTICE

Semivolatile sample spike # 5824 and duplicate sample spike # 5825, from the original sample # 5802, required extensive dilutions in order to accurately detect and quantify all compounds present. Because this dilution factor decreased the surrogates and spikes to levels below the detection limit, these compounds are not reported.

The acid fractions were diluted by a 20:1 factor, while the base/neutrals were diluted 20:1.

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Bob Whitehead *BW*

Quality Control Specialist

Date: 8-23-83

Case 1887

QUALITY ASSURANCE NOTICE

The statements checked below apply to the pesticide fraction of sample # 5542. These statements apply to problems incurred with the quantitation of the surrogate, dibutyl chlorendate, or the spike compounds (QC samples only) flagged by an asterisk (*) on the compound list.

- ☐ No DBC recovery available due to a _____ dilution factor.
- ☐ No spike recovery available due to a _____ dilution factor.
- ☐ No spike recovery available due to severe matrix interference and/or the presence of high levels of PCBs which prevent quantitation of these compounds.
- ☒ No DBC recovery due to severe matrix interference.
- ☐ Variations between duplicate samples due to non-homogenous nature of soil sample.
- ☐ No DBC recovery due to _____ dilution factor on packed/capillary (circle) and matrix interference on packed/capillary columns (circle).
- ☐ Low/high (circle) spike recoveries due to matrix interference.
- ☐ Additional Analyst/Quality Assurance Specialist comments:

initials LS

date 1/25/83

RECEIVED OCT 25 1983

Case 1887

QUALITY ASSURANCE NOTICE

The statements checked below apply to the pesticide fraction of sample # 557C. These statements apply to problems incurred with the quantitation of the surrogate, dibutyl chlorendate, or the spike compounds (QC samples only) flagged by an asterisk (*) on the compound list.

- ☐ No DBC recovery available due to a _____ dilution factor.
- ☐ No spike recovery available due to a _____ dilution factor.
- ☐ No spike recovery available due to severe matrix interference and/or the presence of high levels of PCBs which prevent quantitation of these compounds.
- ☒ No DBC recovery due to severe matrix interference.
- ☐ Variations between duplicate samples due to non-homogenous nature of soil sample.
- ☐ No DBC recovery due to _____ dilution factor on packed/capillary (circle) and matrix interference on packed/capillary columns (circle).
- ☐ Low/high (circle) spike recoveries due to matrix interference.
- ☐ Additional Analyst/Quality Assurance Specialist comments:

Sample contained high levels of arachnids including
PCB 1240 which interferes with DBC.

initials SL

date 7-23-82

RECEIVED OCT 25 1983

Case 1887

QUALITY ASSURANCE NOTICE

The statements checked below apply to the pesticide fraction of sample # 557. These statements apply to problems incurred with the quantitation of the surrogate, dibutyl chlorendate, or the spike compounds (QC samples only) flagged by an asterisk (*) on the compound list.

- ☐ No DBC recovery available due to a _____ dilution factor.
- ☐ No spike recovery available due to a _____ dilution factor.
- ☐ No spike recovery available due to severe matrix interference and/or the presence of high levels of PCBs which prevent quantitation of these compounds.
- ☒ No DBC recovery due to severe matrix interference.
- ☐ Variations between duplicate samples due to non-homogenous nature of soil sample.
- ☐ No DBC recovery due to _____ dilution factor on packed/capillary (circle) and matrix interference on packed/capillary columns (circle).
- ☐ Low/high (circle) spike recoveries due to matrix interference.
- ☐ Additional Analyst/Quality Assurance Specialist comments:

initials SE

date 9/23/83

RECEIVED OCT 25 1983

Case 1887

SOIL SURROGATE PERCENT RECOVERY SUMMARY

CASE NO. 1887
 LOW LEVEL ☒
 WATER ☐
 QC REPORT NO.

CONTRACTOR Mend Compu Chem
 MED. LEVEL ☐
 SOIL/SED. ☒

CONTRACT NO. 68-01-6762
 HIGH LEVEL ☐
 OTHER (Specify)

8/19

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							[-----Volatile-----]			[-----Semi-Volatile-----]					[Pesticide]		[Dioxin]	
SURR. I.D.	EXT. DATE	EXT. I.D.	DATE ANA.	ANAL. I.D.	CC #	SNO Traffic No.	Dg Toluene (#233) (81-120)	BFB (NE) (#247)	D4-1,2 Dichloro Ethane (NE) (#258)	D5 Nitro Benzene (19-120) (#447)	2-Fluoro Biphenyl (17-120) (#448)	D10 Pyrene (NE) (#471)	D14 p-Ter Phenyl (NE) (#496)	D5 Phenol (10-100) (#612)	2-Fluoro Phenol (26-120) (#619)	2,4,6-Tribromo Phenol (NE) (#628)	Dibutyl Chlor- endate (NE) (#738)	1,2,3,4 TCDD (11-130) (#466)
383	8-18		8-4-83	633	5862	E3801	104	100	71									
382	8-18		8-24-83	659	5862 R					74	82	94	84	30	44	26		
368	7-26		9-8-83	597														
364	8-23		8-25-83	763														710*
383	8-18		8-4-83	633	5863	E3802	96	97	75									
382	5-26		8-11-83	659						58	74	74	88	65	82	65		
368	7-26		8-25-83	597													0 ①	
	7-27		8-7-83	755														13
					5864	E3803	Screened Medium											
382	5-26		8-11-83	659						24	61	74	79	76	70	78		
368	7-26		8-25-83	597													8	
	7-27		8-7-83	755														26
383	8-18		8-4-83	633	5865	E3825	90	90	73									
382	7-26		8-11-83	659						78	71	66	84	34	80	65		
364																		30
					5868	E3805	Screened Medium											
382	7-27		8-3-83	714						71	82	57	85	62	66	58		
368	7-26		8-25-83	597													26	
364	8-1		8-1-83	7														*

Volatiles: 0 out of 3; outside of QC limits
 Semivolatiles: 0 out of 20; outside of QC limits
 Dioxin: 2 out of 5; outside of QC limits

*Asterisked values are outside of QC limits.
 NE - Not established.

Comments:

① G.A. Notice Dilution
 * Sample from T-00 RERUN

Case 1887

CASE NO. 1887
LOW LEVEL ✓
WATER _____
QC REPORT NO. _____

CONTRACTOR Mend CompuChem
MED. LEVEL _____
SOIL/SED. ✓

CONTRACT NO. 68-01-6762
HIGH LEVEL _____
OTHER (Specify) _____

8/19

RECEIVED OCT 25 1983

Case 1887

Comments: * 5870. INTERFERENCE PRESENT
* 5871

CASE NO. 1887
LOW LEVEL ←
WATER

CONTRACTOR Mead Compuchem
MED. LEVEL _____
SOIL/SED. ---

CONTRACT NO. 68-01-6762
HIGH LEVEL _____
OTHER (Specify) _____

QC REPORT NO.

[illegible]

Comments :

Volatiles: 1 out of 1; outside of QC limits
Semivolatiles: 1 out of 4; outside of QC limits
Dioxin: 1 out of 1; outside of QC limits

*Asterisked values are outside of QC limits
NE - Not established

U. G. A Notice

Date Limit Set 12/82

Case 1887

SOIL SURROGATE PERCENT RECOVERY SUMMARY

CASE NO. 1884
LOW LEVEL _____
WATER _____
QC REPORT NO. _____

CONTRACTOR Alfred Campbell Inc.
MED. LEVEL ☒
SOIL/SED. ☒

CONTRACT NO. 68-016762
HIGH LEVEL _____
OTHER (Specify) _____

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SURR. I.D.	EXT. DATE	EXT. I.D.	DATE ANA.	ANAL. I.D.	CC #	SMO Traffic No.	Volatile			Semi-Volatile						Pesticide	Dioxin
							(#233) D8 Toluene (81-120)	(#247) BFB (NE)	(#258) D4-1,2 Dichloro Ethane (NE)	(#447) D5 Nitro Benzene (19-120)	(#448) 2-Fluoro Biphenyl (17-120)	(#471) D10 Pyrene (NE)	(#496) D14 p-ter Phenyl (NE)	(#612) D5 Phenol (10-100)	(#619) 2-Fluoro Phenol (26-120)	(#628) 2,4,6- Tribromo Phenol (NE)	(#738) Dibutyl Chlor- endate (NE)
383	8-7-83		8-11-83	714	5868	E3805	83	88	77								
383	8-7		8-11-83	714	5868	E3805	83	90	99	83							

Volatiles: 1 out of 2; outside of QC limits
Semivolatiles: out of ; outside of QC limits
Dioxin: out of ; outside of QC limits

*Asterisked values are outside of QC limits.
NE - Not established.

Comments :

Case 1887

VOLATILES
REAGENT BLANK SUMMARY

Page of

CASE NO. 1987
LOW LEVEL XX
WATER
QC REPORT NO.

CONTRACTOR Mead
MED. LEVEL
SOIL/SED. XX

CONTRACT NO. 68-01-6762
HIGH LEVEL
OTHER (SpecTfy)
UNITS (Circle) (ug/kg) ug/l

FRACTION	CAS# NUMBER	COMPOUND	CONCEN- TRATION	CONTRACT DETECTION LIMITS	COMMENTS	ASSOCIATED SAMPLES SMD #	CC #
VOLATILES:							
File I.D.							
<u>6704</u>	<u>75-09-2</u>	<u>Methylene Chloride</u>	<u>2.9</u>	<u>2.5</u>	<u>E3801</u>	<u>E3806</u>	<u>5862-63</u>
Instrument I.D.					<u>E3802</u>	<u>E3807</u>	<u>5865</u> <u>5864</u>
					<u>E3825</u>	<u>E3808</u>	<u>5868-71</u>
					<u>E3805</u>	<u>E3805</u>	
VOLATILES:							
File I.D.							
<u>GC 830804A05</u>		<u>NONE</u>				<u>E3802</u>	<u>5863</u>
Instrument I.D.						<u>E3825</u>	<u>5865</u>
						<u>E3806-08</u>	<u>5869-71</u>
VOLATILES:							
File I.D.							
<u>GC 830804C05</u>		<u>NONE</u>				<u>E3801</u>	<u>5862</u>
Instrument I.D.						<u>E3805</u>	<u>5868</u>
<u>CB 830804B12</u>						<u>E3803</u>	<u>5864</u>
VOLATILES:							
File I.D.							
Instrument I.D.							

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Case 1887

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CONTRACT NO. 68-01-6762
HIGH LEVEL
OTHER (Specify) _____
UNITS (Circle) (ug/kg) ug/l

[illegible]

Case 1887

PESTICIDE
REAGENT BLANK SUMMARY

Page of

CASE NO. 1337
LOW LEVEL X
WATER
QC REPORT NO.

CONTRACTOR (Simplicon, Inc.)
MED. LEVEL
SOIL/SED. X

CONTRACT NO. 65-61-676.2
HIGH LEVEL
OTHER (Specify)
UNITS (Circle) ug/kg ug/l

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FRACTION PESTICIDES:	CAS# NUMBER	COMPOUND	CONCENTRATION	CONTRACT DETECTION LIMITS	COMMENTS	ASSOCIATED SMO #	SAMPLES CC #
File I.D. <u>6078</u>		<u>NONE</u>				<u>E3806</u>	<u>E3801</u>
Instrument I.D.						<u>E3807</u>	<u>E3802</u>
						<u>E3808</u>	<u>E3803</u>
							<u>E3825</u>
							<u>E3805</u>
PESTICIDES:							
File I.D.							
Instrument I.D.							
PESTICIDES:							
File I.D.							
Instrument I.D.							
PESTICIDES:							
File I.D.							
Instrument I.D.							

Case 1887

TCDD
REAGENT BLANK SUMMARY

Page of

CASE NO. 1887
LOW LEVEL XX
WATER
QC REPORT NO.

CONTRACTOR MEAD CONDUHEM
MED. LEVEL
SOIL/SED. XY

CONTRACT NO. 68-01-6762
HIGH LEVEL
OTHER (Specify)
UNITS (Circle) ug/kg ug/l

FRACTION	CAS# NUMBER	COMPOUND	CONCENTRATION	CONTRACT DETECTION LIMITS	COMMENTS	ASSOCIATED SAMPLES SMO	CC
TCDD :							
File I.D.							
<u>6078</u>		<u>NONE</u>			<u>6% RECOVERY</u>	<u>E3801</u>	
Instrument I.D.						<u>E3802</u>	<u>5862-5865</u>
						<u>E3803</u>	
						<u>E3825</u>	<u>5868-5871</u>
						<u>E3805</u>	
						<u>E3806</u>	
						<u>E3807</u>	
						<u>E3808</u>	
TCDD :							
File I.D.							
Instrument I.D.							
TCDD :							
File I.D.							
Instrument I.D.							
TCDD :							
File I.D.							
Instrument I.D.							

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Case 1887

MAJIX SPIKE DUPLICATE/RECOVERY

CASE NO. 1887 CONTRACTOR MEAD COMPUCHIE CONTRACT NO. 68-01-6762
 LOW LEVEL XX MID. LEVEL XX HIGH LEVEL XX
 WATER XX SOIL/SED. XX OTHER (Specify) XX
 QC REPORT NO. XX UNITS (Circle) (ug/kg) ug/l

FRACTION	COMPOUND	SMD #	CONC. SPIKE ADDED	CONC. MS	% REC.	CONC. MSD	% REC.	RPD	QC LIMITS* RPD RECOVERY	COMMENTS
VOA 5813 SMD #	1,1-Dichloroethylene	ND	12.5	13	104	12	96	8	<15%	51-150
	Trichloroethylene	ND	12.5	9	72*	8.2	66	9	<15%	74-130
	Chlorobenzene	ND	12.5	14	112	12	96	15	<15%	67-130
	Toluene	ND	12.5	14	112	12	96	15	<15%	58-130
5842 5823R MS #E3746 MSD #E3726	Benzene	ND	12.5	13	104	12	96	8	<15%	56-130
	1,2,4-Trichlorobenzene	ND	2000	27000	140,000	140,000	140,000	140,000	<50%	38-110
	Acenaphthene	ND	2000	—	—	—	—	—	<50%	57-120
	2,4-Dinitrotoluene	ND	2000	—	—	—	—	—	<50%	43-110
5844 5825 MS #E3785 MSD #E3785	Di-N-Butylphthalate	ND	2000	—	—	—	—	—	<50%	13-110
	Pyrene	ND	2000	—	—	—	—	—	<50%	25-140
	N-Nitrosodi-N-Propylamine	ND	8000	—	—	—	—	—	<50%	34-110
	1,4-Dichlorobenzene	ND	2000	47	—	47	—	—	<50%	33-110
5844 5825 ACID 5802 SMD #	Pentachlorophenol	ND	2000	—	—	—	—	—	<40%	19-120
	Phenol	ND	2000	—	—	—	—	—	<40%	23-80
	2-Chlorophenol	ND	2000	—	—	—	—	—	<40%	33-110
	P-Chloro-N-Cresol	ND	2000	—	—	—	—	—	<40%	32-110
5844 5825 MS #E3785 MSD #E3785	4-Nitrophenol	ND	12000	—	—	—	—	—	<40%	15-90
	Lindane	—	80	—	—	—	—	—	<40%	87-110
	Heptachlor	—	80	—	—	—	—	—	<40%	43-120
	Aldrin	—	80	—	—	—	—	—	<40%	45-110
5826R 5827R MS #E3785 MSD #E3785	Dieldrin	—	80	—	—	—	—	—	<40%	56-120
	Endrin	—	80	—	—	—	—	—	<40%	89-110
	P.P-DDT	—	80	—	—	—	—	—	<40%	82-100
	PEST 5802 SMD #	—	80	—	—	—	—	—	<40%	87-110

*Asterisked values are outside QC limits.

RPD: VOA: 0 out of 5; outside QC limits
 B/N: 7 out of 7; outside QC limits
 ACID: 5 out of 5; outside QC limits
 PEST: 4 out of 4; outside QC limits

RECOVERY: VOA: 2 out of 10; outside QC limits
 B/N: 4 out of 4; outside QC limits
 ACID: 10 out of 10; outside QC limits
 PEST: 12 out of 12; outside QC limits

SEE Q.A.
 NOTICE
 5862-63,
 5866-5871

5862-5865
 5868-5871

See QA Notice

5862-63, 5865,
 5869-71

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Case 1887

MATRIX SPIKE DUPLICATE/RECOVERY

CASE NO. 1337 CONTRACTOR HEAD COMPUTHER CONTRACT NO. 68-01-6762
 LOW LEVEL XX M.D. LEVEL XX HIGH LEVEL OTHER (Specify)
 WATER XX SOIL/SED. XX UNITS (Circle) ug/g ug/l
 QC REPORT NO. _____

FRACTION	COMPOUND	SMO #	CONC. SPIKE	CONC. MS	% REC.	CONC. MSD	% REC.	RPD	QC LIMITS*	COMMENTS
VOA 5311 SMO #	1,1-Dichloroethylene	ND	25	21	84	21	84	0	<15%	5854,
	Trichloroethylene	ND	25	21	84	21	84	0	<15%	5848,
E3794	Chlorobenzene	ND	25	22	88	22	88	0	<15%	5790 # 3794
MS # E3794 MSD # E3794	Toluene	4.8	25	22	98	22	88	0	<15%	
	Benzene	ND	25	20	96	20	80	0	<15%	
B/N	1,2,4-Trichlorobenzene								<50%	
SMO #	Acenaphthene								<50%	
	2,4-Dinitrotoluene								<50%	
	Di-N-Butylphthalate								<50%	
MS #	Pyrene								<50%	
MSD #	N-Nitrosodi-N-Propylamine								<50%	
	1,4-Dichlorobenzene								<50%	
ACID	Pentachlorophenol								<40%	
SMO #	Phenol								<40%	
	2-Chlorophenol								<40%	
MS #	P-Chloro-M-Cresol								<40%	
MSD #	4-Nitrophenol								<40%	
PEST	Lindane								<40%	
SMO #	Heptachlor								<40%	
	Aldrin								<40%	
MS #	Dieldrin								<40%	
MSD #	Endrin								<40%	
	P,p-DDT								<40%	

*Asterisked values are outside QC limits.

RPD: VOAs 0 out of 2; outside QC limits
 B/N 0 out of 0; outside QC limits
 ACID 0 out of 0; outside QC limits
 PEST 0 out of 0; outside QC limits

RECOVERY: VOAs 0 out of 5; outside QC limits
 B/N 0 out of 0; outside QC limits
 ACID 0 out of 0; outside QC limits
 PEST 0 out of 0; outside QC limits

Date Limits Set 12/82
 Revision Due 6/83

RECEIVED OCT 25 1983

Case 1287

VOLATILE INSTRUMENT TUNE AND PERFORMANCE

CASE NO. 1887
 LOW LEVEL ✓
 WATER

CONTRACTOR Mead CompuChem
 MED. LEVEL
 SOIL/SED. ✓

CONTRACT NO. 68-01-6762
 HIGH LEVEL
 OTHER (Specify)

Date: 8/4/83

BFB File Name: BFB30604C05

Shift: C

Analyst: 714

Mass	<u>BFB</u> Ion Abundance Criteria	% Relative Abundance
50	15 - 40 percent of mass 95	16
75	30 - 60 percent of mass 95	38
95	base peak, 100 percent	100
96	5 - 9 percent of mass 95	6.7
173	less than 2 percent of mass 174	0
174	greater than 50 percent of mass 95	85
175	5 - 9 percent of mass 174	4.6 (5.4) ¹
176	greater than 95 percent, but less than 101 percent of 174	81
177	5 - 9 percent of mass 176	4.4 (5.5) ²

BFB Performance Results:

☐ The BFB performance results were reviewed and found to be within the specified criteria.

Initials

Date

<input type="checkbox"/> Deviations	Date/Time/Instrument	File Number	Compound	m/z	Required Abundance	Observed Abundance

Initials

Date

Comments:

¹ Value in () is % of mass 174

² Value in () is % of mass 176

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FORM VII

Revision Date 7/83 JRT

Case 1887

VOLATILE INSTRUMENT TUNE AND PERFORMANCE

CASE NO. 1887
LOW LEVEL _____
WATER _____CONTRACTOR Mead CompuChem
MED. LEVEL _____
SOIL/SED. _____CONTRACT NO. 68-01-6762
HIGH LEVEL _____
OTHER (Specify) _____Date: 8/4/83 BFB File Name: BFB80804A05
Shift: A Analyst: 633

Mass	<u>BFB</u> <u>Ion Abundance Criteria</u>	<u>% Relative Abundance</u>
50	15 - 40 percent of mass 95	21
75	30 - 60 percent of mass 95	40
95	base peak, 100 percent	100
96	5 - 9 percent of mass 95	8.6
173	less than 2 percent of mass 174	<2%
174	greater than 50 percent of mass 95	86
175	5 - 9 percent of mass 174	5.2 (6.0) ¹
176	greater than 95 percent, but less than 101 percent of 174	85
177	5 - 9 percent of mass 176	4.6 (5.4) ²

BFB Performance Results:

☐ The BFB performance results were reviewed and found to be within the specified criteria._____
Initials_____
Date☐ Deviations

<u>Date/Time/Instrument</u>	<u>File Number</u>	<u>Compound</u>	<u>m/z</u>	<u>Required Abundance</u>	<u>Observed Abundance</u>
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_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Initials_____
DateComments:

1 Value in () is % of mass 174

2 Value in () is % of mass 176

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FORM VII

Revision Date 7/83 JRT

Case 1887

SEMI-VOLATILE INSTRUMENT TUNE AND PERFORMANCE

CASE NO. 1887 CONTRACTOR Mead CompuChem CONTRACT NO. 68-01-6762
 LOW LEVEL _____ MED. LEVEL _____ HIGH LEVEL _____
 WATER _____ SOIL/SED. _____ OTHER (Specify) _____

DFTPP File Name: DHB30012A16
 Date: 8/12/83 Shift: A Analyst: 659

Mass	DFTPP Ion Abundance Criteria	% Relative Abundance
51	30 - 60 percent of mass 198	48.24
68	less than 2 percent of mass 69	—
70	less than 2 percent of mass 69	—
127	40 - 60 percent of mass 198	57.19
197	less than 1 percent of mass 198	—
198	base peak, 100 percent	100.00
199	5 - 9 per cent of mass 198	6.00
275	10 - 30 percent of mass 198	20.01
365	greater than 1 percent of mass 198	3.41
441	present but less mass than 443	10.08
442	greater than 40 percent of mass 198	62.46
443	17 - 23 percent of mass 442	12.51 (20)*

DFTPP and BFB Performance Results:

☒ The DFTPP performance results were reviewed and found to be within the specified criteria.

BP 8/12/83
 Initials Date

☐ Deviations

Date/Time/Instrument	File Number	Compound	m/z	Required Abundance	Observed Abundance
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Initials Date

Comments:

Pentachlorophenol Response Factor = $\frac{40}{50} \times \frac{\text{Area } 266}{\text{Area } 188} = 0.2$

Benzidine Detectable ☒ Yes ☐ No
 Area (Counts) 40 ng D10 Anthracene = 51838
 Di-N-Butyl Phthalate Saturated ☐ Yes ☒ No

* Figure in () is % of mass 442

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Case 1887

SEMI-VOLATILE INSTRUMENT TUNE AND PERFORMANCE

CASE NO. 288
 LOW LEVEL
 WATER

CONTRACTOR Mead CompuChem
 MED. LEVEL
 SOIL/SED.

CONTRACT NO. 68-01-6762
 HIGH LEVEL
 OTHER (Specify)

DFTPP File Name: 04730320 A14Date: 8-20-83Shift: AAnalyst: 602

Mass	DFTPP Ion Abundance Criteria	% Relative Abundance
51	30 - 60 percent of mass 198	57%
68	less than 2 percent of mass 69	0%
70	less than 2 percent of mass 69	< 2%
127	40 - 60 percent of mass 198	47%
197	less than 1 percent of mass 198	0%
198	base peak, 100 percent	100%
199	5 - 9 per cent of mass 198	8%
275	10 - 30 percent of mass 198	15%
365	greater than 1 percent of mass 198	2%
441	present but less mass than 443	7%
442	greater than 40 percent of mass 198	41%
443	17 - 23 percent of mass 442	9% (22%)*

DFTPP and BFB Performance Results:

☐ The DFTPP performance results were reviewed and found to be within the specified criteria.

Initials

Date

☐ Deviations

Date/Time/Instrument	File Number	Compound	m/z	Required Abundance	Observed Abundance

Initials

Date

Comments:

Pentachlorophenol Response Factor = $\frac{40}{\text{Area } 188} \times \frac{\text{Area } 266}{50} = .07$

Benzidine Detectable ☒ Yes ☐ No

Area (Counts) 40 ng D10 Anthracene = 94559

Di-N-Butyl Phthalate Saturated ☐ Yes ☐ No

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* Figure in () is % of mass 442

FORM VII

JF

Case 1887

CASE NO. 1887
LOW LEVEL _____
WATER _____

CONTRACTOR Mead CompuChem
MED. LEVEL _____
SOIL/SED. _____

CONTRACT NO. 68-01-6762
HIGH LEVEL _____
OTHER (Specify) _____

DFTPP File Name: DH830024A16
Date: 8/29/83 Shift: A Analyst: 659

Mass	DFTPP Ion Abundance Criteria	% Relative Abundance
51	30 - 60 percent of mass 198	56.98
68	less than 2 percent of mass 69	—
70	less than 2 percent of mass 69	—
127	40 - 60 percent of mass 198	54.88
197	less than 1 percent of mass 198	.
198	base peak, 100 percent	100.00
199	5 - 9 per cent of mass 198	5.07
275	10 - 30 percent of mass 198	22.94
365	greater than 1 percent of mass 198	2.20
441	present but less mass than 443	8.97
442	greater than 40 percent of mass 198	71.22
443	17 - 23 percent of mass 442	15.30 (21 -)*

DFTPP and BFB Performance Results:

☒ The DFTPP performance results were reviewed and found to be within the specified criteria.

BP
Initials

8/29/83
Date

☐ Deviations
Date/Time/Instrument File Number Compound m/z Required Abundance Observed Abundance

Initials

Date

Comments:

Pentachlorophenol Response Factor = $\frac{40}{50} \times \frac{\text{Area } 266}{\text{Area } 188} = \boxed{0.07}$
Benzidine Detectable ☒ Yes ☐ No
Area (Counts) 40 ng D10 Anthracene = 68823
Di-N-Butyl Phthalate Saturated ☐ Yes ☒ No

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* Figure in () is % of mass 442

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Revision Date 7/83

JRT

Case 1887

CASE NO. 1887
LOW LEVEL _____
WATER _____

CONTRACTOR Mead CompuChem
MED. LEVEL _____
SOIL/SED. _____

CONTRACT NO. 68-01-6762
HIGH LEVEL _____
OTHER (Specify) _____

DFTPP File Name: HG-830828C16
Date: 8-27-83 Shift: C Analyst: blb

Mass	DFTPP Ion Abundance Criteria	% Relative Abundance
51	30 - 60 percent of mass 198	55
68	less than 2 percent of mass 69	<2
70	less than 2 percent of mass 69	<2
127	40 - 60 percent of mass 198	57
197	less than 1 percent of mass 198	<1
198	base peak, 100 percent	100
199	5 - 9 per cent of mass 198	7
275	10 - 30 percent of mass 198	24
365	greater than 1 percent of mass 198	71
441	present but less mass than 443	<443
442	greater than 40 percent of mass 198	740
443	17 - 23 percent of mass 442	76.88 (22.)*

DFTPP and BFB Performance Results:

☒ The DFTPP performance results were reviewed and found to be within the specified criteria.

WR
Initials

8/27
Date

Deviations	Date/Time/Instrument	File Number	Compound	m/z	Required Abundance	Observed Abundance
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Initials

Date

Comments:

Pentachlorophenol Response Factor = $\frac{40}{\text{Area } 188} \times \frac{\text{Area } 266}{50} = \boxed{0.52}$

Benzidine Detectable ☒ Yes ☐ No

Area (Counts) 40 ng DIO Anthracene =

Di-N-Butyl Phthalate Saturated ☐ Yes ☒ No

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* Figure in () is % of mass 442

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Revision Date 7/83

JR

Case 1887

SEMI-VOLATILE INSTRUMENT TUNE AND PERFORMANCE

 RE NO. 1837
 W LEVEL _____
 TER _____

 CONTRACTOR Mead CompuChem
 MED. LEVEL _____
 SOIL/SED. _____

 CONTRACT NO. 68-01-6762
 HIGH LEVEL _____
 OTHER (Specify) _____
DFTPP File Name: DA 8309.6C16Date: 9-15-83

Shift: _____

Analyst: _____

Mass	DFTPP Ion Abundance Criteria	% Relative Abundance
51	30 - 60 percent of mass 198	41
68	less than 2 percent of mass 69	—
70	less than 2 percent of mass 69	—
127	40 - 60 percent of mass 198	51
197	less than 1 percent of mass 198	—
198	base peak, 100 percent	—
199	5 - 9 per cent of mass 198	7
275	10 - 30 percent of mass 198	52
365	greater than 1 percent of mass 198	—
441	present but less mass than 443	1.05
442	greater than 40 percent of mass 198	43.71
443	17 - 23 percent of mass 442	(17%)*

DFTPP and BFB Performance Results:

☐ The DFTPP performance results were reviewed and found to be within the specified criteria.

Initials _____

Date _____

Deviations	File Number	Compound	m/z	Required Abundance	Observed Abundance
Date/Time/Instrument					
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Initials _____

Date _____

Comments:

 pentachlorophenol Response Factor = $\frac{40}{\text{Area 188}} \times \frac{\text{Area 266}}{50} =$
Benzidine Detectable ☐ Yes ☐ No

Area (Counts) 40 ng D10 Anthracene =

di-N-Butyl Phthalate Saturated ☐ Yes ☐ No

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Figure in () is % of mass 442

SEMI-VOLATILE INSTRUMENT TUNE AND PERFORMANCE

CASE NO. _____
 LOW LEVEL _____
 WATER _____

CONTRACTOR Mead CompuChem
 MED. LEVEL _____
 SOIL/SED. _____

CONTRACT NO. 68-01-6762
 HIGH LEVEL _____
 OTHER (Specify) _____

DFTPP File Name: DH830810B15
 Date: 8-10-83 Shift: 3 Analyst: 727

Mass	DFTPP Ion Abundance Criteria	% Relative Abundance
51	30 - 60 percent of mass 198	57%
68	less than 2 percent of mass 69	<.1%
70	less than 2 percent of mass 69	<.1%
127	40 - 60 percent of mass 198	47%
197	less than 1 percent of mass 198	0.3%
198	base peak, 100 percent	100%
199	5 - 9 per cent of mass 198	6.7%
275	10 - 30 percent of mass 198	22%
365	greater than 1 percent of mass 198	2.0%
441	present but less mass than 443	13%
442	greater than 40 percent of mass 198	92%
443	17 - 23 percent of mass 442	17% (18.8%)*

DFTPP and BFB Performance Results:

☐ The DFTPP performance results were reviewed and found to be within the specified criteria.

 Initials Date

☐ Deviations

Date/Time/Instrument	File Number	Compound	m/z	Required Abundance	Observed Abundance

 Initials Date

Comments:

Pentachlorophenol Response Factor = $\frac{40}{\text{Area 188}} \times \frac{\text{Area 266}}{50} = \boxed{.15}$

Benzidine Detectable ☒ Yes ☐ No
 Area (Counts) 40 ng D10 Anthracene = 89308
 Di-N-Butyl Phthalate Saturated ☐ Yes ☒ No

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* Figure in () is % of mass 442